HP LaserJet printer product update

March 2004 • Volume 23

+hp

Spring is arriving in HP LaserJet Land! As the world economies improve, we are confident that sales and the resulting need for quality support will increase. We feel that this year more customers will adopt color in the office. Excitement over our new line of HP Color LaserJet printers grows as we continue working to develop new products. Thank you for your continued support!

Inside . . .

For Public Distribution

hp invent

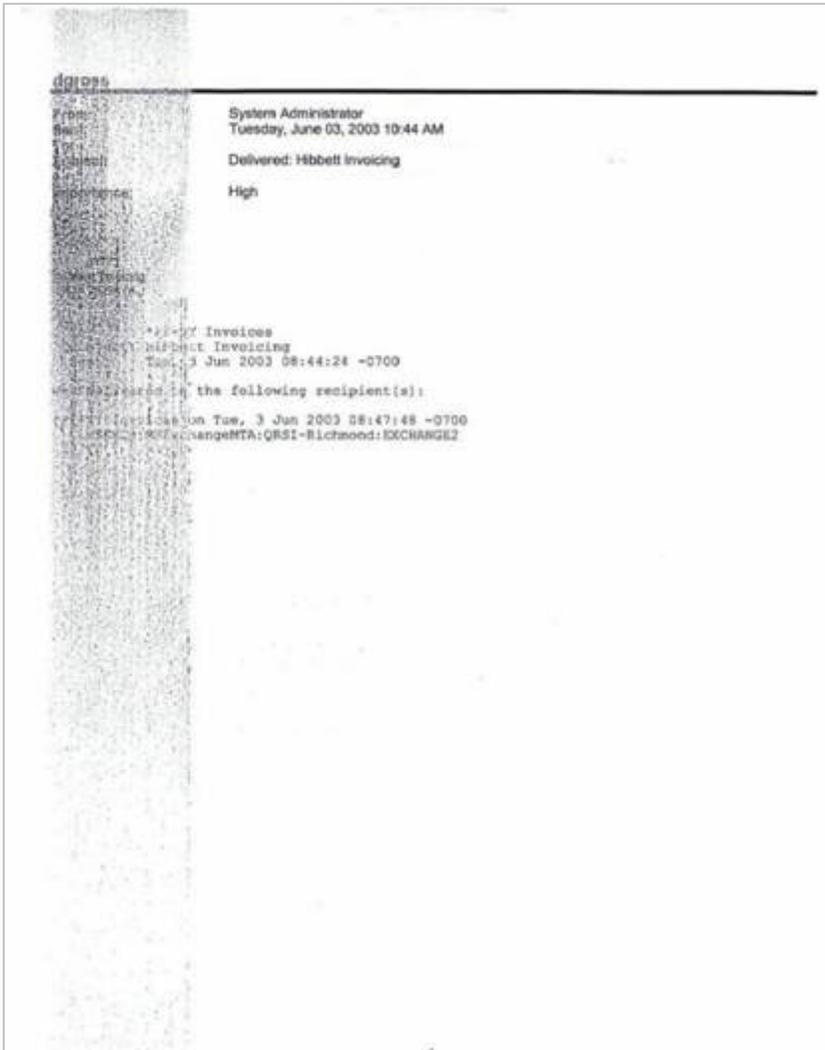# HP LaserJet 4200 printer—torn fuser film service note

Some users of the HP LaserJet 4200 series printer have experienced printing problems caused by delaminated or torn film on the product's fuser and occurring before the end of the fuser's 200,000-page life. The cause of the tearing film is a flange component set at an excessively angled position on some units. This issue has been corrected, and all fusers produced subsequently will have a proper flange component in place.

Below is an example of print quality problems associated with the torn film. Other indications that the film is torn include pieces of the film coming out with the printed output or the fuser area of the product.
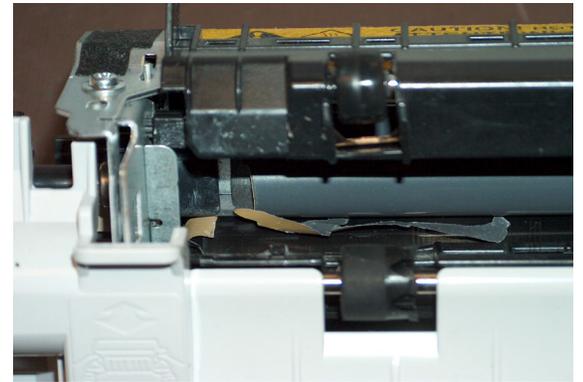
To determine if the fuser film is torn, lift the fuser tray guide and examine the film. Film in good condition appears as a solid gray roller, film in poor condition exhibits the film sleeve shifting to the left and shredded film pieces. If the film is torn, replace the fuser. When this issue occurs before the end of the fuser's 200,000-page life, customers are not charged for the fuser replacement.

For more information

Please see service note number Q2425A-03.

Torn fuser film

Affected fusers are listed below.

Product numbers	Serial number range	Replacement part numbers
Q2425A Q2426A Q2427A Q2428A Q2446A Q2447A	**110 V models**	
	USBNL00001-99999 USBNM00001-99999 USBNN00001-99999 USBNP00001-99999 USBNS00001-99999 USBNX00001-99999 USDNL00001-19672 USDNM00001-20855 USDNN00001-21009 USDNP00001-20810 USDNS00001-20698 USDNX00001-21024	RM1-0013-040
	220 V models	
	USDF00001-99999	RM1-0014-040

**Poor print quality caused by torn fuser film**

HP LaserJet 4200/4300 printer—broken fuser latch

Fuser latches have been breaking before the end of the fuser's life. The latches in question are the blue grasping latches at the back of the printer used to insert the fuser into position and lock it in place. The latch closest to the gear or drive side of the fuser is most commonly discovered to be broken. Symptoms associated with this issue are a noticeable crack on the latch (see picture, top right) and a resulting break that may cause a grinding noise and paper jams.

A production countermeasure, implemented in October of 2003, consists of a triangular tab in the middle of each latch to help reinforce the plastic in the stress area most susceptible to breaking (see diagram, bottom right). The part numbers have rolled.

Field action

Please replace fusers that exhibit cracked or broken latches; part numbers are below:

Cracked fuser latch

Reinforcing triangular rib

Former, break-susceptible latch
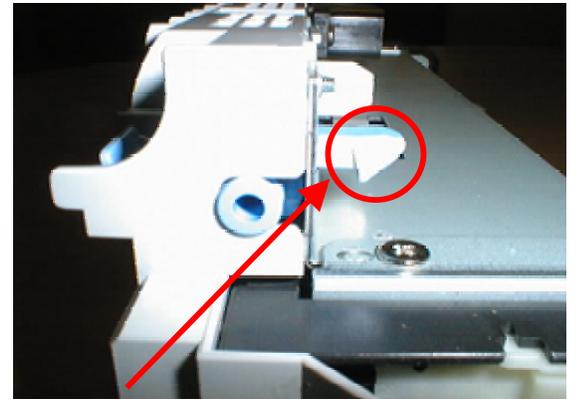
Current, reinforced latch
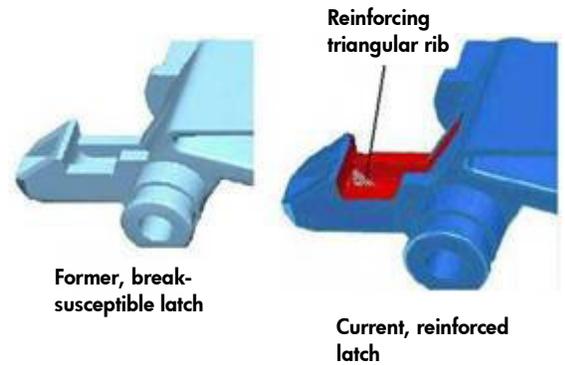
Fuser latch countermeasure diagram

Old part number	New part number	Part description
Q2425-69006	Q2425-69009	4200 110 V fusing assembly
Q2425-69007	Q2425-69010	4200 220 V fusing assembly
Q2429-67902	Q2429-67903	4200 110V maintenance kit
Q2429-69002	Q2429-69003	4200 110V exchange maintenance kit
Q2430-67902	Q2430-67903	4200 220V maintenance kit
Q2430-69002	Q2430-69003	4200 220V exchange maintenance kit
Q2431-69009	Q2431-69011	4300 110 V exchange fusing assembly
Q2431-69010	Q2431-69012	4300 220 V exchange fusing assembly
Q2436-67903	Q2436-67904	4300 110V maintenance kit
Q2436-69003	Q2436-69004	4300 110V exchange maintenance kit
Q2437-67903	Q2437-67904	4300 220V maintenance kit
Q2437-69003	Q2437-69004	4300 220V exchange maintenance kit
RM1-0013-010CN	RM1-0013-040CN	4200 110 V fusing assembly
RM1-0014-010CN	RM1-0014-040CN	4200 220 V fusing assembly
RM1-0101-050CN	RM1-0101-070CN	4300 110 V fusing assembly
RM1-0102-050CN	RM1-0102-070CN	4300 220 V fusing assembly

HP Color LaserJet 3500/3700 printer updates

10.92.XX error

Some customers have experienced a 10.92.XX error at power on. The error refers to a cartridge not engaging correctly, and "XX" corresponds to the print cartridge causing the error:

- 00 = Black print cartridge
- 01 = Cyan print cartridge
- 02 = Magenta print cartridge
- 03 = Yellow print cartridge

There are several issues that can cause this error, including:

- One or more cartridges not seated properly
- Broken cartridge engaging tab on the right side of the front door
- Damaged shutter arm on a cartridge
- Missing or out of place left rail guide
- Broken left arm drum lock
- ITB gears not aligned, broken, or disengaged
- Broken ITB gear train
- Broken cartridge alignment knob

Troubleshooting

First, the cartridges should be reseated. If this does not resolve the issue the following troubleshooting steps can help to determine the cause of the error.

1   Close the door slowly and look inside to see if the toner shutters open properly while the door closes. Check whether there is any abnormal resistance when closing the door. If any shutter does not open, or you experience resistance shutting the door, go to step two.

If the door closes normally, check the cartridge engaging tab on the right side of the front door. If it is broken, replace the tab, part number RC1-1247-000CN

Print cartridge engaging tab

2   If only one of the cartridge shutters does not open, inspect the cartridge shutter and wire arm for damage. Replace the cartridge if damaged.

3   If the cartridge looks good, go through the disable cartridge check and swap out toner cartridges to see if the issue follows the cartridge or stays with the slot. Use the XX element of the error code to identify any changes once cartridges are swapped. If the XX identifier follows the cartridge, replace it.

4   Check to see whether the left rail guide is in place. If not, replace it.
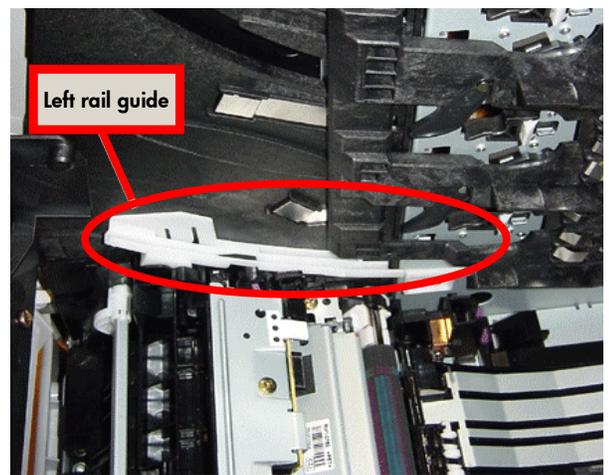
Position of left rail guide

5. Check the left arm drum lock in the upper left of the printer. If it is broken, it will be in the down position.

Left arm drum lock

Left arm drum lock

Tip of lock that may be broken
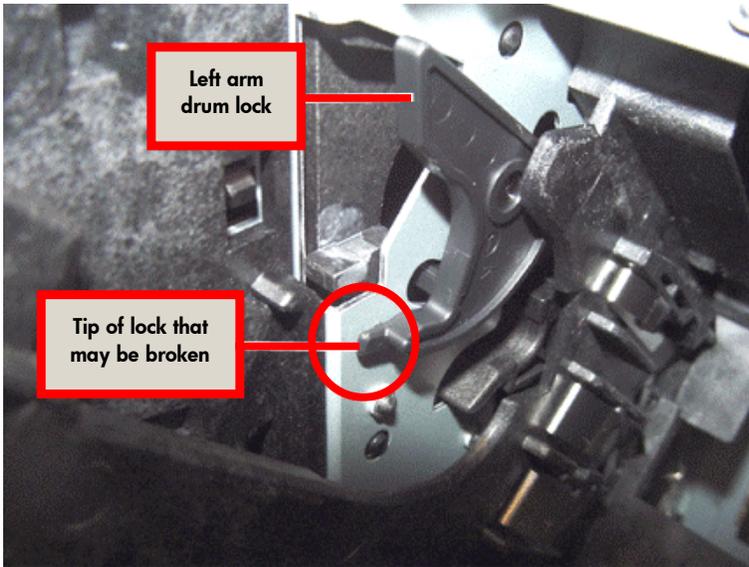
**Location of cartridge alignment knob and detail**

6. Reseat the ITB. Ensure that the levers are down and that the shipping locks are removed if the printer is new. If the printer still shows the error, measure the gap between the belt and the metal bracket on the bottom end of the ITB.

If the gap is 1 to 2 mm (.04 to .08 inches), then the ITB is in the correct position; if the gap is 5 to 6 mm (.2 to .23 inches), then the ITB is alienated and in mono printing mode.

If there is a wide gap, try rotating the large white gear on the bottom-right of the ITB clockwise. It may offer some resistance, but the belt of the ITB should move closer to the metal bracket. If the gear is broken or will not turn, the ITB may need to be replaced.

If the gear is in good condition, but opening and closing the door causes it to disengage, then the ITB gear train may need to be replaced.

7. Check the cartridge alignment knobs on the left side of the printer. If the small white latch is missing, or the black piece immediately behind it is broken, the printer must be replaced. This part may not be replaced in the field due to the delicate alignment necessary to ensure correct cartridge positioning. If the piece is missing, the door may have some difficulty in closing and all of the cartridge shutters may not shut. If all the other steps have been taken and this piece is identified, the printer must be replaced.

Black piece that holds white latch in place
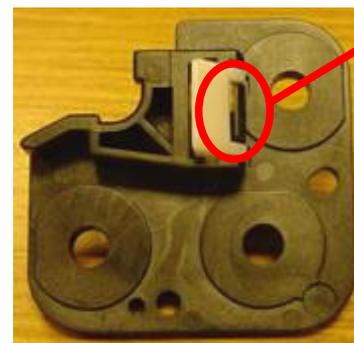
Cartridge alignment knob

Noisy black toner cartridge drive clutch

The black toner cartridge drive clutch (CL2) may make a chattering sound that can occur early in a printer's life expectancy. In order to stop the chattering noise, insert the washer countermeasure as depicted below. The washer's part number is XD1-1108-229CN.
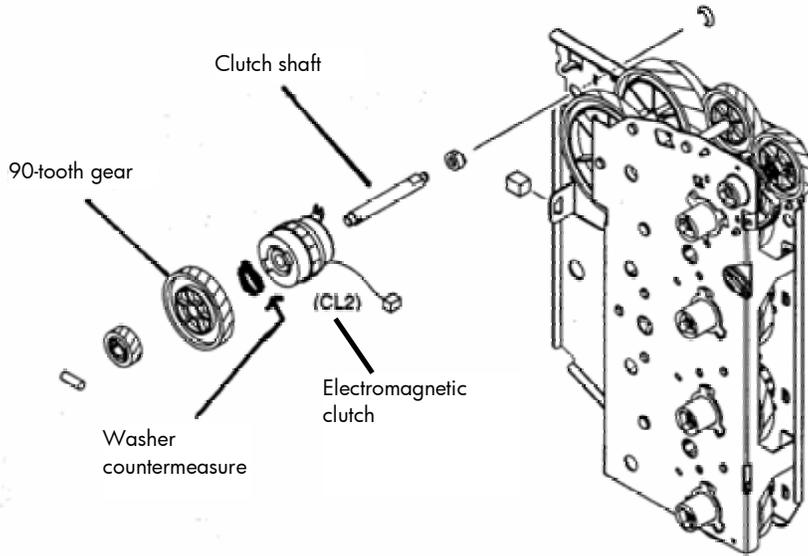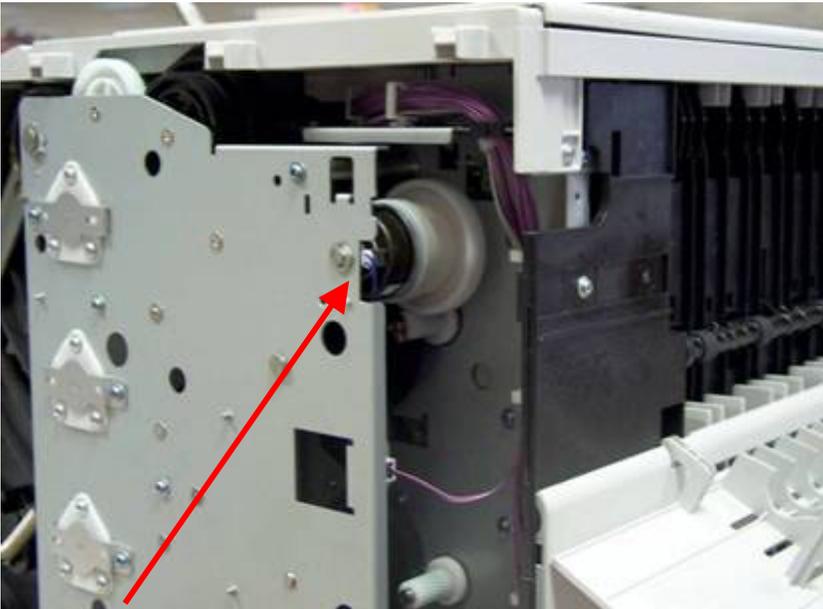

Black toner cartridge drive assembly

Drive clutch location

Causes of wear on the image transfer belt

While the fuser's life is not dependant on media size or type (one page of any size or type is considered one page of life), media size, type, and printing mode can affect the life expectancy of the ITB.

For the ITB, letter-sized media or smaller is considered to be the same size. Media sizes larger than letter, such as legal-sized media, decrease the life of the ITB due to the additional rotations required.

In addition, use of the following media types and printing modes decrease the life of the ITB:

- Best Gloss 1
- Gloss 2
- Gloss film
- Best Heavy 1
- Best Heavy 2
- Best Label
- OHT

41.7 errors

A 41.7 error may be displayed later in the life of some printers. This error may be caused by several different factors; please consider the following:

- Ensure that the printing media complies with HP specifications. Refer to the paper media guide: http://h20015.www2.hp.com/hub_search/document.jhtml?lc=en&docName=bpr01395

- Separation pads can wear with age and use, especially with rough media use. Replacement part numbers are:

  - Tray 1:   RC1-0939-000CN
  - Tray 2:   RC1-0954-000CN
  - Tray 3:   RM1-0827-000CN

- Pick-up rollers can also wear with age and normal and rough media use. Replacement part numbers are:

  - Tray 1:   RC 1-1535-000CN
  - Trays 2 and 3:   RM1-0731-000CN

Color plane mis-registration after installing new ITB

If a new ITB (image transfer belt) has been installed and color plane registration problems occur, the shipping locks may not have been removed from the ITB. The photo below depicts the orange shipping lock on the left side of the ITB—there is another lock on the right side.

Left ITB shipping lock

HP Color LaserJet 9500 printer updates

Firmware revision

The 20040113 05.004.2 firmware revision is now available from HP at the following URL: www.hp.com/go/clj9500_firmware. You may see improvements to the following issues after installing the updated firmware:

- After storing a large number of jobs on the hard drive, the printer may generate a 49.4C06 error when printing a menu map.

- An endless calibration loop may occur when a CPR (color plane registration) retry is followed by an internal request for calibration.

- Slow printing with PCL 5c occurs when a foreground color is selected and the current palette at the time of selection has a DirectByPixel raster format.

- Printer displays a 49.FF06 error when a single user has 10 or more private stored jobs and selects to print ALL PRIVATE JOBS.

- Certain PostScript® files generate a 49.4C02 error.

- Bold PostScript text from Macintosh systems does not render properly.

- Using the Multifunction Finisher and printing Face-Up or Face-Down the job flips orientation within the first couple of pages or after an internal calibration.

- Some PDF files placed in Quark Xpress may cause a PostScript error.

- Sending a large number of fonts to the hard drive causes a 49.0508 error when printing the PostScript font list.

- Inability to upgrade firmware using the HP LaserJet Utility on the Macintosh platform. (Resolution of this issue will occur after upgrading this firmware version using a program other than the HP LaserJet Utility.)

- PostScript errors may occur when printing DCS2 files created from a non-HP scanner.

- When the control panel lock function is set to MAX with HP Web Jetadmin, the paper tray settings may be altered by opening and closing a tray.

- Objects and/or text are missing or printed incorrectly when using a third-party DIMM solution.

- When the PCL 5 pre-punched media command precedes the duplex command, the output is correct. When the commands are reversed, pages are rotated incorrectly.

- 49.0E00 error when printing some PDF files with the PostScript driver.

- "µ" prints italicized with certain PostScript typefaces.

- Images printed from tray 4 may be offset beyond what the SET REGISTRATION control panel setting can adjust.

- CMYK images have a difficult time printing highlights below 10 percent.

HP Color LaserJet 9500 series printer

HP Multifunction Finisher (C8088A) firmware revision: 031212_R

Changes have been made improving performance with a single-sheet job. In addition, the following issues have been addressed:

- The stacking tray moves down to a position lower than specified when the accumulator ejects sheets during a three-page print job.
- The alignment plate moves forward during a rear side adjustment when normal stacking mode is set to OFFSET.
- The alignment plate does not open appropriately before receiving the first sheet during staple mode when media printed after a long interval stacks on the accumulator.

Stapler/Stacker (C8085A) firmware revision: 031218_R

- Multiple changes have been made to enhance auto-flushing after a jam condition.
- Changes were made to send pages not supported by the Face-Down bin to the Face-Up bin.
- Changes have been made to help address certain scenarios that may cause 13.12.13, 13.12.02, 13.12.25, and 13.12.0D jams.
- The paper offset for A4 paper size in landscape orientation and A3 paper size has been reduced to a half-inch.

In addition, the following issues have been addressed:

- Landscape-oriented documents are stapled in the wrong location.
- TOO MANY PAGES TO STAPLE does not clear from the control panel without a power cycle.
- When printing to the Face-Down bin using long media (11 by 17 or A3), the pages start to output to the Face-Up bin.

Stacker (C8084A) firmware revision: 031211_R

- Speed for ejecting the paper to the Face-Up bin has been increased to keep pages from being pulled below the exit roller.

- The paper path will now halt motors to avoid ignoring a restart while ramping down with a sheet of paper coming.
- Change to support noise and motor halting problems to help printers running at a lower speed.
- Changes have been made to help address certain scenarios that may cause 13.12.0D and 13.12.02 jams.

In addition, the following issues have been addressed:

- When the stacker is detached, the printer may hang while performing a media autoflush.
- When printing to the Face-Down bin using long media (11 by 17 or A3), the pages start to output to the Face-Up bin.

Control panel stuck at CALIBRATING

Some printers, when powered-on, go through the typical warming up procedure, but stop at the message CALIBRATING. This also may occur when the printer enters a calibration cycle in the middle of a print job.

To troubleshoot this problem, follow the steps below:

1 Open the printer's front doors and lower the green handle.
2 Open the printer's right (ITB access) door and remove the ITB.
3 Locate the black plastic shutter that covers the calibration sensor.

Calibration sensor shutter

4 With the ITB access door open, open and close the front, right door. As the door moves, check that the black shutter moves back and forth.

5 If the shutter does not move, make sure that the actuator arm located on the left side of the shutter is hooked into place.

Actuator arm

6 Reconnect the actuator arm if it is disconnected: pull down on the end of the shutter and push the actuator arm into the hole on the end of the shutter. The arm often falls into place when the shutter is pulled down.

7 Once the arm is reconnected, manually push the shutter toward the front of the printer to ensure that the arm remains in place and that the shutter moves freely.

59.E0 error

The service manual indicates that a 59.E0 error is a registration motor error. However, the error may also be caused by the secondary transfer assembly since it is driven by the registration motor. Please use the following troubleshooting steps when you encounter a 59.E0 error:

1 Cycle the printer off and on to clear the error.

2 Set each tray's paper type as Plain, and load letter or A4 media in each tray.

3 Print an event log from either tray 1 or tray 4 (if installed). Note if the error occurs when printing from these trays and whether a 41.19 error precedes the 59.E0 error in the event log.

A 41.19 error typically indicates that the error is associated with the secondary transfer assembly. Another indication that this assembly is at fault is that the error only occurs when printing from trays 2 and 3.

To determine if the secondary transfer assembly is causing the errors, follow the steps below:

1 Cycle the printer off and on to clear any errors.

2 Open the front door of the printer and lower the green ITB lever.

Note

If the secondary transfer assembly or secondary transfer roller is out of place, the lever may not lower. Do not force the lever, as this may break other components.

3 Remove the secondary transfer roller and inspect it for damage. The end of the roller that sits at the rear of the printer is spring-loaded; ensure that the spring located between the blue plastic housing and the black bushing is present. Replace the roller if it appears damaged or the spring is missing.

4 Reinstall the roller and try printing from tray 2 or tray 3. If the error persists, replace the secondary transfer assembly.

5 Check connectors J3030 on the registration motor and J121 on the DC controller PCA.

6 Replace the DC controller PCA.

If the error occurs from all trays, including trays 1 and 4, and no 41.19 error is listed on the event log, the printer is most likely experiencing a registration motor error. Follow the troubleshooting steps below:

1 Cycle the printer off and on to clear the error.

2 Check the registration assembly for damage or jammed media.

3 Ensure that the gear train on the registration drive assembly functions correctly.

4   Use the control panel COMPONENT TEST to ensure test motor M11 functions correctly.

5   Check connectors J3036 on the registration motor and J117 on the DC controller PCA.

6   Replace the registration motor if the motor fails the component test.

7   Replace the DC controller PCA.

Background information

The high voltage contacts for the secondary transfer roller are located on the secondary transfer assembly. Using the cams on the bottom of the secondary transfer assembly, these contacts move into place against the secondary transfer roller every time a page is printed. The cams are engaged by firing a solenoid which engages the clutch mechanism on the secondary transfer assembly.

The timing for moving the high voltage contacts into place varies because, depending on the media source selected, media moves at a different speed prior to registration. Tray 1 feeds at .5 speed, trays 2 and 3 feed at 1.5 speed, and tray 4 feeds at full speed. If the solenoid or clutch cannot move the secondary transfer roller high voltage contacts into place once the media has reached the registration assembly, a 59.E0 error posts on the control panel.

Just prior to the 59.E0 error, a 41.19 secondary transfer high voltage error posts in the event log. The error is most likely to occur from trays 2 and 3 since the media moves fastest to registration from these trays. However, if these mechanisms are not working at any speed, the error occurs from all trays.

Poor fusing after PowerSave

After spending several hours in PowerSave mode, the printer may produce output with toner improperly fused to the page. Output may not improve until 20 to 50 pages have been printed or the printer undergoes a power cycle. This issue is most commonly seen when the printer is first used in the morning, after spending the night in PowerSave mode.

The following conditions must be met in order for this issue to occur:

• The PowerSave setting must be High (this is the default setting for 220 volt printers).

• The ambient room temperature must be less than or equal to 60° F (15° C).

• The printer must spend six to eight hours in PowerSave mode (shorter or longer periods of time will not cause this issue).

To workaround this issue, change the PowerSave setting to Low, following the steps below:

1   From the printer control panel, press Select (√) to access the menu.

2   Navigate down the menu to CONFIGURE DEVICE and press Select (√).

3   Navigate down the menu to RESETS and press Select (√).

4   Navigate down the menu to POWERSAVE and press Select (√).

5   Navigate down the menu to LOW and press Select (√).

Note

Because the Low setting does not meet Blue Angel energy-saving requirements for Germany, this is a temporary workaround.

Recurring REMOVE AND SHAKE <COLOR> CARTRIDGE message

Some customers have experienced a recurring REMOVE AND SHAKE <COLOR> CARTRIDGE error message. Approximately 200 pages after a new print cartridge is installed, the control panel posts the error REMOVE AND SHAKE <COLOR> CARTRIDGE. Following these instructions may clear the error for 10 to 20 pages, but then the error message appears again. This issue has been seen with original print cartridges shipped with the printer, as well as with replacement print cartridges.

Please replace the print cartridge that is causing the error. Cartridges with lot code 3D23XX or earlier have been identified as having a defect which causes the automatic pull strip embedded in the cartridge not to release correctly when the cartridge is initially installed.

The lot code is found on the front of the print cartridge as indicated below, in a format similar to other print cartridges:

- First digit: year (3=2003, 4=2004)
- Second digit: month (A=Jan, B=Feb)
- Third and fourth digits: day
- Fifth and sixth digits: shift

For example, 3D23S1 indicates 23 April 2003, first shift.

In addition, check the lot codes of the printer's remaining three print cartridges. If any of the cartridges have a lot code 3D23XX or earlier, check the clear plastic pull strip on the bottom of the cartridge, under the shutter, for damage. Replace any print cartridges with damaged pull strips. The error message is likely to appear for these cartridges as well when toner runs low in the image drum.

Lot code location

Note

Only a small percentage of cartridges within the indicated lot code range will exhibit this issue. Do not replace all cartridges within the range, only those that exhibit the torn strip or error message.

The image below shows what a typical failing cartridge pull strip looks like, compared with a good cartridge. The cartridge is shown with the shutter pulled back, in the installed position.

Torn Mylar strip—failing cartridge

Mylar strip in good condition

Print cartridge Mylar strip in poor and good condition

Background information

When a new image drum is installed in the printer, it is primed with a limited amount of toner. As soon as the automatic toner replenishment (ATR) sensor detects that the toner to carrier ratio in the image drum is low, it requests that toner be transferred from the print cartridge to the image drum. If the ATR sensor does sense a change to the toner/carrier ratio, the message REMOVE AND SHAKE <COLOR> CARTRIDGE is posted on the control panel, assuming that shaking the cartridge will help transfer toner from the print cartridge.

Reasons for the ratio not changing include:

- Toner is bound in the print cartridge. This is most likely to occur if the print cartridge was exposed to high temperatures during transport.
- The motor on the T-cartridge drive assembly is not working properly, either electrically or mechanically.
- The toner outlet on the bottom of the print cartridge did not open properly when it was installed in the printer, or the outlet is otherwise blocked.

DSS (Digital Sending Services) updates

DSS Workflow version 1.1 update

DSS Workflow version 1.01 must be updated to version 1.1. Please carefully follow the steps below to update the software.

Uninstalling Chai JAR files

IMPORTANT

The following steps explain how to uninstall the printer's Chai files. You must uninstall the Chai files before installing the new DSS Workflow version.

1 From the Windows Start menu, select **Programs**, **Hewlett-Packard**, **Remote Chai Loader**, and click **Remote Chai Loader** to open the **Remote Chailet Loader** dialog box.
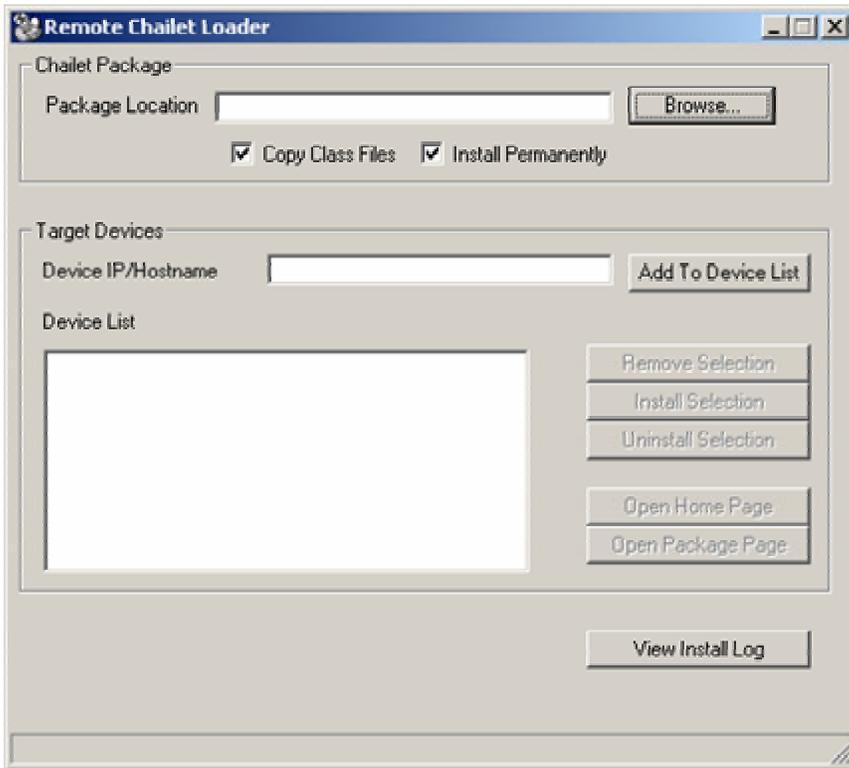
2 Type the IP address of the printer in the **Device IP/Hostname** box and click **Add To Device List**.

3 Click **Browse** and navigate to where the Chai JAR files are stored. By default, they are located in: [C]:\Program Files\Hewlett-Packard\HP DSS Workflow\HPDSS ChaiJars

Note

The Chai JAR files need to be uninstalled in the same order that they were installed:

1 hp_laserjet_dynamicmenus_30a_1.3.jar

2 hp_laserjet_dssauth_30a_3.75x.jar

3 s_hp_dssworkflow_4100_9000_2024.jar

4 After selecting the first file, highlight the IP address in the **Device List** area, and then click **Uninstall Selection** to uninstall the first Chai JAR file. Repeat this process to uninstall the second and then the third Chai JAR files, making sure that you uninstall them in the correct order.

If the preceding steps do not uninstall the Chai JAR files, you may need to initialize the hard disk on the printer. However, a hard disk initialization is not recommended until all other options are eliminated, as it removes all information on the disk, including address books and speed dial lists.

Follow the steps below to initialize the hard disk:

1 While powering-on the device, hold the Start button down until all 3 LED lights remain solidly lit.

2 Release the Start button, and press the left arrow button to display INITIALIZE DISKS.

3 Press Select (√) to initialize the disks.

Installing DSS Workflow 1.1

After uninstalling the Chai JAR files, follow the steps below to install DSS Workflow 1.1.

1 Run the file: 190374339236111_hp_dss_workflow_english_only.exe

2 Uninstall the previous version of DSS Workflow when prompted. After uninstalling, you may need to reboot the computer.

3 Again, run the file: 190374339236111_hp_dss_workflow_english_only.exe

The most current version of DSS Workflow is installed. If you have already registered DSS Workflow, there is no need to register again.

Installing current Chai JAR files

To complete the installation of DSS Workflow 1.1, you must re-install the most current Chai JAR files. Follow the steps on page 13 for uninstalling the files, except click **Install Selection** rather than **Uninstall Selection** in step four.

Note
Make sure that you install the Chai JAR files in the following order: 1 hp_laserjet_dynamicmenus_30a_1.3.jar 2 hp_laserjet_dssauth_30a_3.75x.jar 3 s_hp_dssworkflow_4100_9000_2024.jar

Firmware and DSS compatibilities

Questions have arisen concerning which firmware versions are compatible with which DSS software versions. The table below details DSS Workflow and HP AutoStore versions and the firmware versions with which they are compatible.

Note
JAR files must be installed during the installation of DSS Workflow or HP AutoStore. The JAR files are installed in the following directories: DSS Workflow: [C]:\Program Files\Hewlett-Packard\HP DSS Workflow\HPDSS ChaiJars\4100_9000\ HP AutoStore: [C]:\Program Files\NSI\AutoStore\ChaiJars\ If earlier versions of the JAR files have been installed, they will need to be removed before installing newer JAR files. Please refer to the install guide on how to install the files.

DSS Workflow

Firmware	Version	JAR files
3.757	1.0 (first release)	s_hp_dssworkflow_4100_9000_2022.jar
		hp_laserjet_dssauth_30a_3.75x.jar
		hp_laserjet_dynamicmenus_30a_1.3.jar
3.779	1.02.000	s_hp_dssworkflow_4100_9000_2026.jar (or later)
		hp_laserjet_dssauth_30a_3.75x.jar
		hp_laserjet_dynamicmenus_30a_1.3.jar

HP AutoStore

Firmware	Version	JAR Files
3.757	1.0-202	s_hp_autostore_4100_9000_2021.jar
		hp_laserjet_dynamicmenus_30a_1.1.jar
3.779	1.01 (fall release 2003)	s_hp_autostore_4100_9000_2032.jar
		hp_laserjet_addressbook_30z)3.75x.jar
		hp_laserjet_dynamicmenus_30a_1.3.jar

How to access HP LaserJet training

Where is the one-stop-shop for HP LaserJet training information? It depends on who is requesting the training. Following are a few training resources based on audience:

Opportunities for HP Partners (outside the HP firewall):

- The **Learning Center**, accessed at http://vsslfpro.compaq.com/plm/, is the main global resource for training content. However, it contains only Web-based or self-paced courses, not instructor-led courses. HP Partners must obtain student ID numbers to use this site. Use the following link to obtain an external account: http://vsslfpro.zcce.compaq.com/Plm/contact/index.html
  For HP employees from any region, to log on you must select North America as your region, and enter an eight-digit employee number (add leading zeros). To search for courses, select Available Courses, and look under **Printers—Imaging/Print Technology or Printers—Laser**.

- The **Services Media Library** is available on CD by subscription. Partners with **CSN.COM** access can order the CD; go to www.hp.com/partners/csn and log on. Select **Support Tools & Information** under the **Technical Support** heading, click **Technician's Toolbox** at the top of the screen, then select **Order Now**. This tool provides animated job aids, videos, and computer simulations to help you better understand HP products.

- In North America, you may access HP LaserJet training information from the Partnership Web at https://partner.americas.hp.com. Select **Training** in the left navigation bar and then select **Printing and Digital Imaging** from the **Service and Support Training** menu. This site provides both Web-based and instructor-led training information.

Opportunities for HP Internal Employees (those who sit inside the HP firewall):

- http://learn.hp.com offers courses in both Web-based and instructor-led formats—search for "LaserJet." Web-based courses should always be available for download; instructor-led course availability varies according to course demand. Learn.hp.com will track your learning progress and keep a record of the courses you've taken.

- The **Learning Utility** is a training repository in which course materials are stored. If you can not find what you are looking for on learn.hp.com check out this internal site. You must use the **Browse LU** search tool to locate courses, and search for "LaserJet". This tool will not track your courses or provide you with a learning record, so searching via learn.hp.com first is recommended. There are three servers available for the **Learning Utility**:
  - Americas: http://learning1.americas.cpqcorp.net
  - EMEA: http://learning2.emea.cpqcorp.net
  - A/P: http://learning4.asiapac.hp.com

- The **Services Media Library** is not an official training Web site, but with animated job aids, videos, and computer simulations, it is a useful tool to help you better understand HP products. The animations can be run from the main server or downloaded to your computer for more convenient access: http://learning1.americas.cpqcorp.net/wbt/e9-10200-wb/default.htm. Check out the **Procedures** section under the product of your choice.

HP learning center